

**WHAT IS CLAIMED IS:**

1. A method for providing virtual private networks for voice over data network applications, the method comprising:
  - a) creating at least two routing information database on a location server;
  - b) defining a virtual private network for each routing information database;
  - c) receiving registration information from gateways in communication with the location server; and
  - d) associating each gateway with one of the virtual private networks.
5. The method of claim 1, wherein the method further comprises assigning an identifier for each virtual private network.
10. The method of claim 1, wherein the method further comprises communicating the registration information to other location servers in the same network telephony administrative domain.
15. The method of claim 1, wherein the data network uses Internet Protocol.
5. The method of claim 4, wherein the routing information database is a telephony routing over IP routing information base.
6. The method of claim 1, wherein the method further comprises leaking a global routing information database to a routing information database for a particular virtual private network.
20. 7. A network device, comprising:
  - a) more than one routing information database;
  - b) at least one port operable to receive registration information from gateways in communication with the network device; and
  - c) an association table operable to associate each gateway with a routing information database, thereby associating each gateway with a virtual private network.
25. 8. The network device of claim 7, wherein the device further comprises an interface through which the device communicates with other devices having routing information databases to synchronize information contained in the routing information databases between the devices.
30. 9. The network device of claim 7, wherein the device is a server.
10. The network device of claim 7, wherein the device is a router.
11. An article including instructions that, when executed, result in:
  - a) creation of at least two routing information databases on a network device;

- b) definition of a virtual private network for each routing information database;
- c) reception of registration information from gateways in communication with the location server; and
- d) association of each gateway with one of the virtual private networks.
- 5    12. The article of claim 10, wherein the article further comprises a downloadable file.
13. The article of claim 10, wherein the article further comprises a processor having the instructions stored in memory.
14. A network device, comprising;
- a) means for providing more than one routing information base;
- 10    b) means for defining a virtual private network for each routing information base;
- c) means for receiving registration information from gateways in communication with the network device; and
- d) means for associating each gateway with one of the virtual private networks.